Chemical & Engineering NEWS

SBR leads slump in elastomers
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Hazardous waste disposal

Many technologies compete for piece of the action Page 10

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Chemical & Engineering NEWS

Cover: SCA Chemical Services' 50,000 gal-per-day hazardous waste incineration facility nears completion on Chicago's South Side. Photo by C&EN's Ward Worthy

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Elastomers' recovery finally under way

Demand for SBR was down, but rebound in EPDM, nitrile rubber, and polybutadiene helped pull industry growth rate up to 2.2% last year

Patricia L. Layman
C&EN, New York

For producers of synthetic elastomers, last year was a painful one, but it was the pain of wounds starting to heal. After severe drops in demand in 1980, producers started seeing improvement in consumption for at least some elastomers, and the outlook for 1982 is that things finally will be getting better all around.

There were still a lot of negatives to cope with last year, of course. The major synthetic elastomer, styrene-butadiene rubber (SBR), which accounts for 53% of the industry's consumption, was off 1% in 1981, and that basically held down overall growth to 2.2% for the year. Neoprene demand also was down 1%, and polyisoprene down probably almost 20%. And exports, which had been up 10% in 1980, helping keep the total drop in 1980 consumption to 20%, were off: Preliminary figures indicate a decline from 449,145 metric tons to 367,000.

But beyond that, there were several bright spots last year. High on the list was ethylene-propylene-diene monomer (EPDM), demand for which was up 14%. Nitrile rubber use was up 8%, and polybutadiene posted a 7% gain. Butyl rubber was pretty much flat for the year—no gain, but no loss, either. Sales into traditionally heavy markets, housing and automotive, still were down, but sales of elastomers for the tire business were up, as replacement-tire sales spurted up. And, perhaps most important, what one producer calls "some hotsy-totsy markets" were becoming increasingly important.

Key Polymers

That can only be good news for synthetic elastomers producers, who have been faced with relatively high inventories over the past few years—even while operating, in the case of at least one elastomer, at less than 50% of industry capacity. And inventories are providing at least one worrying point for producers who watched some recovery in 1981 and who are hopeful about this year: a rise in inventories at the end of last year above the normal pattern.

However, there is no reason to write off 1982 yet. There are too many positive signs pointing to a recovery for that.

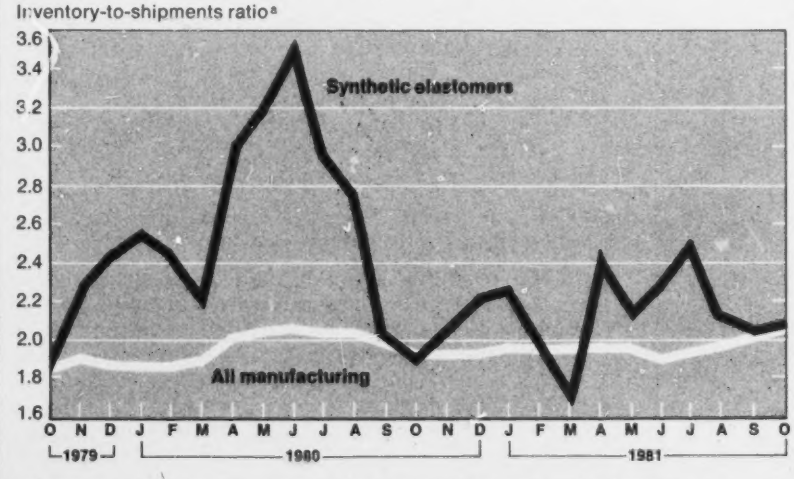
Leading the recovery was EPDM, which last year charted a 14% jump in consumption. That helped make up some of the ground lost when the material took a 23% decline in 1980. And producers of the elastomer are figuring optimistically that by the end of this year, it will have overcome all of that drop, to top 1979 consumption—the only elastomer to have recovered so quickly and completely.

In fact, the product has an appealing enough future to have enticed Polysar, the Sarnia, Ont.-based producer of synthetic elastomers, into the business, with the purchase in December of B. F. Goodrich's EPDM-polybutadiene plant in Orange, Tex. The plant gives Polysar a substantial presence in the polybutadiene market with the 72 million lb-per-year capacity in Orange complementing the production capacity it already has in Canada. But basically the company bought the plant to get into the EPDM business. The 22 million lb-per-year capacity may not be very large, but it gives the company an entrée into the markets.

Rather than being linked as heavily to tires as, say, SBR and polybutadiene, that end use accounts for only about 9% of EPDM consumption. Another 30 to 40% goes into the automotive business, in a variety of applications. These include radiator hoses, gaskets, and seals, for example—and the market is growing slightly because of substitution for other elastomers, such as SBR and neoprene, even though the automotive market itself is depressed.

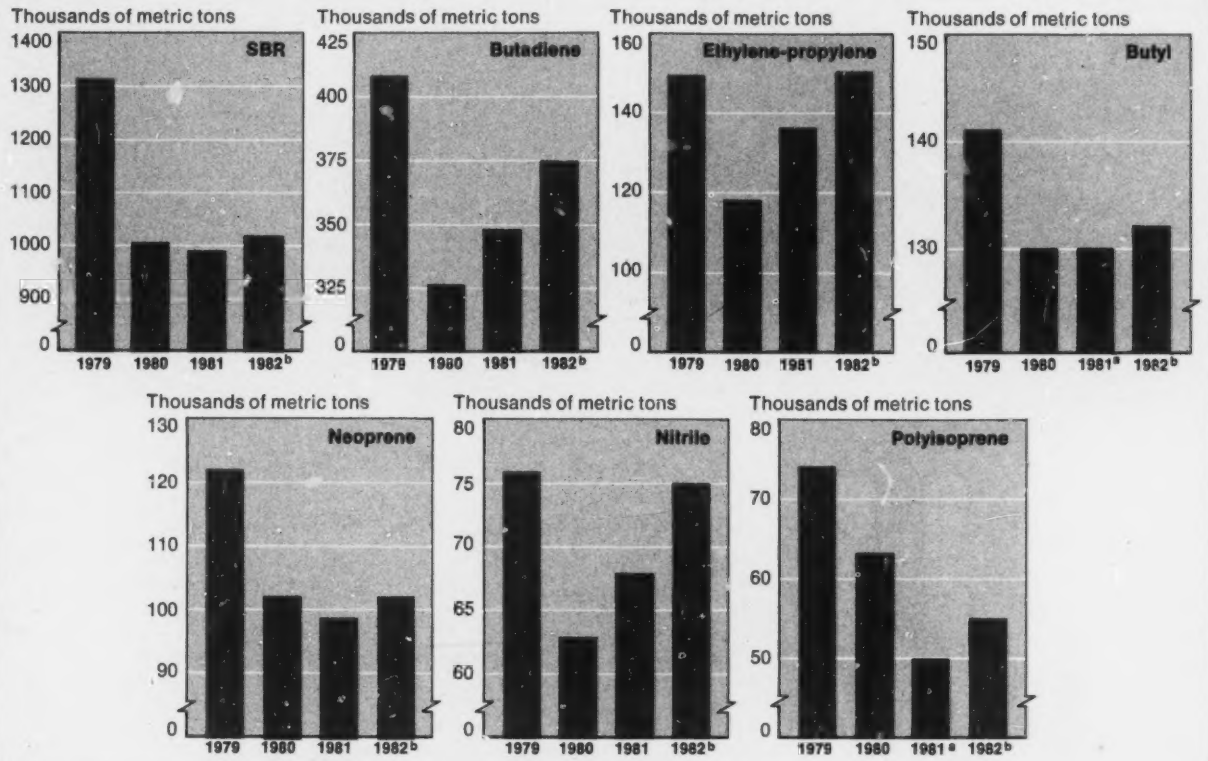
But even more than that, EPDM producers are finding the target by raising their sights—to the roof, in fact. EPDM producers become ecstatic about the potential for the elastomer in sheet-rubber roofing, as a replacement for traditional builtup roofing materials. In fact, one producer attributes that application with pulling up the entire EPDM business, as the 30 million lb-per-year roofing segment chalked up a more than 50% growth last year.

High inventories hurt elastomers over past two years



[a] Seasonally adjusted. **Sources:** Rubber Manufacturers Association, Department of Commerce

Synthetic elastomer consumption: a slow recovery from drop in 1980



a C&EN estimates based on 10-month data. b C&EN estimates. **Source:** Rubber Manufacturers Association

As newer materials such as EPDM make inroads into traditional markets, however, the older elastomers are being given a correspondingly rough time. SBR production, for example, was down 1% last year, and neoprene (polychloroprene) was down a similar amount.

With only 99,000 metric tons of neoprene consumed last year, producers were operating at roughly 47% capacity, and those utilization and consumption rates aren't expected to change much this year. Neoprene continues to suffer because of the depressed condition of its two largest markets—automotive and housing. Even a significant smaller end use, neoprene latexes for shoe production, was down because the domestic shoe industry has been depressed lately.

But neoprene also is suffering as it comes under attack in some of the specialty markets, such as adhesives: Block copolymer thermoplastic elastomers, for example, are winning larger shares of the adhesives industry, besides replacing neoprene for such applications as cable and hosing and coatings for wire. And that is expected to continue. Growth prospects for neoprene between now and 1985 are 2 to 2.5% per year, whereas for the thermoplastics, it will be nearly three times that.

What some tire manufacturers say was a decided pickup in the sales of replacement tires helped boost consumption of polybutadiene to 349,000 metric tons last year, and the outlook for this year is 375,000 metric tons.

An improvement in the tire business, however, didn't do much good for butyl rubber, demand for which is expected to grow only slightly this year, from an estimated 130,000 metric tons in 1981 to about 132,000 this year. And producers see future demand growth coming along the same slow but steady lines: to 145,000 metric tons by 1985, and 158,000 metric tons by 1990. Most of that growth is, of course, dependent on the tire—and therefore auto—industries; if those businesses make an about-face and start a smart growth period, they will take butyl along with it.

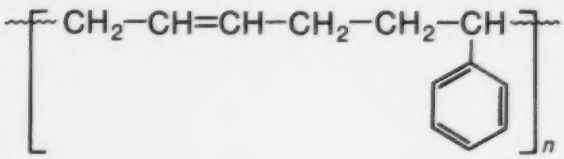
Polyisoprene, whose sole producer is Goodyear with a 60,000 metric-ton-per-year plant at Beaumont, Tex., continues to have consumption troubles, and also supply problems. The problem continues to be feedstock availability, limited by low operating rates of ethylene crackers. Demand had slipped 12% from 1979 to 1980, and it is estimated that consumption was down another 21% in 1981, from 62,615 metric tons to less than 50,000. Imports stood at 11,084 metric tons in 1980, and were running at 11,900 as 1981 ended, to help meet demand.

Petrochemical availability is hampering the polyisoprene business, but petroleum is helping the nitrile business, which chalked up the second-highest growth last year for elastomers, at 8%. As oil-drilling activity increased, so did the market for nitrile, particularly as blowout preventers for oil rigs. And other markets, in seals and gaskets, for example, continued strong.

The first two months of this year still haven't completed a turnaround, producers say—they are not completely out of the slump yet. And this year sees at least one major question mark, as tire workers' contracts expire with the major tire producers in April. But if there is no work disruption, and if the economy picks up any steam at all, 1982 will be better than 1981—it's just been a long, slow climb getting there. □

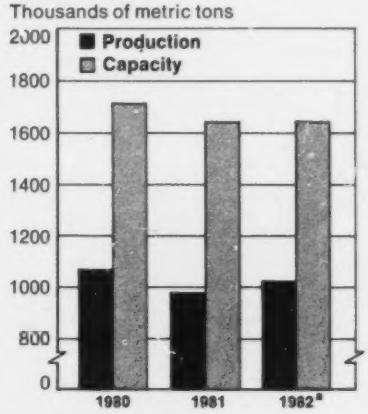
Key Polymers

SBR



- ***Demand terrible***
- ***Operating rates down***
- ***Profits poor***

PRODUCTION/CAPACITY



[a] C&EN estimates.

HOW MADE

Free radical polymerization (mostly emulsion) of butadiene and styrene

MAJOR END USES

Tire and tread rubber 73%, mechanical goods 15%, latex 9%

FOREIGN TRADE

Exports—11% of production in 1981, down from 14.5% the year before; imports—more than 50,000 metric tons or 5% of production, a 23% increase over 1980 imports

PRICES

List prices run from 57.5 cents per lb for oil-extended tire grade to 70 cents per lb for nonoil-extended to 81 cents per lb for specialty grades; heavily discounted

COMMERCIAL VALUE

$1.32 billion for production, 1981

Last year, there was still enough optimism in the elastomers industry that producers of styrene-butadiene rubber (SBR) were predicting that consumption would be up nearly 10% for the year, from 1.006 million metric tons in 1980, to almost 1.1 million metric tons. But that didn't happen. Preliminary figures of the Rubber Manufacturers Association indicate that there was, instead, a 1% decrease, resulting in consumption of 996,000 metric tons of the elastomer in 1981. This year the industry is being more cautious, predicting an increase of less than 3%.

That's a dreary picture for SBR, which makes up some 53% of the total elastomers industry. And the long-term outlook for the material isn't much more encouraging. SBR producers are running their plants at only about 60% of capacity; the material is seeing traditional markets in a slump or being threatened by newer, more sophisticated elastomers; and a traditional strong point—exports—is off, with imports on the rise.

In 1980, exports of SBR totaled 145,463 metric tons, up 18% over 1979. But in 1981, the U.S. dollar began strengthening, and the export business plummeted. Full-year results aren't in yet, but indications are that exports dropped 20% in 1981, to about 115,000 metric tons. And imports, which historically have been relatively insignificant, rose nearly 25%, and are expected to have topped 52,000 metric tons.

Imports can't help but hurt an industry already operating at only about 60% of official capacity. That even takes into account the closing, at least temporarily, last year, of American Synthetic Rubber Co.'s SBR plant in Louisville. But at 70,000 metric tons per year, that was the smallest SBR plant in the U.S. to begin with. So its mothballing—ASRC may reopen the plant if economic conditions improve—had little impact on the business. One marketer suggests there has been some price stabilization, but others say that is sheer fantasy.

The major market for SBR is in tires and tread rubber, and the slump in that business helped keep consumption down in 1980. That market continued to be hurt, especially in original-equipment tires. The fourth quarter of 1981 was running at a 20-year low, although that was up from the first quarter of 1981, which was at a 35-year low—in other words, the same volume as right after World War II. On the other hand, demand for replacement tires, which make up about 80% of the tire market, was up 5 to 6% in 1981. That helped steady the SBR market, as well as the market for polybutadiene. Polybutadiene depends even more on the tire industry, and, in fact, saw an increase in consumption in 1981.

But for SBR, the year saw an intensifying effort on the part of producers of other elastomers to eat into markets that SBR had held securely. Several years ago, tires and tread rubber accounted for only about 63% of total SBR consumption, with the rest of the business spread among various mechanical rubber goods for both automotive and nonautomotive applications (25%), latexes (10%), and other miscellaneous items (2%). Last year, however, tires and tread rubber accounted for 73%. Demand for mechanical rubber goods had declined to about 15%, latexes to 9%, and miscellaneous about 3%. The elastomer is fighting to retain markets for such applications as hoses and tubing, molded parts, gaskets, and seals, as newer polymers such as EPDM offer performance improved enough to justify higher prices.

Even the tire industry doesn't offer SBR producers comfort. Short-term, 1982 sales of original-equipment tires are not expected to be any better than 1981 sales. Replacement tire sales are expected to show a growth of only about 2% with a similar long-range growth. Slowly but surely, as the auto makers downsize, tires are being downsized from a standard 15 inches to 14 inches, on down to 13 inches, and that means less SBR required. And more radial tires are being sold—66% of all passenger car tires sold in 1981, in fact—and they tend to last longer than bias-belted tires.

If any more production capacity is shut down—and producers agree that it will take a major closing to make any difference—the SBR business may well return to a profitable commodity status. But until then, or until any major new markets are developed, the business will be an increasingly depressed one.

Venezuela's petrochemicals back on track

Since taking over in 1977, Pequiven has returned many of its petrochemical units to sound operation, is now working to boost fertilizer

Pequiven (Petroquimica de Venezuela), the petrochemical arm of the state-owned oil company Petroleos de Venezuela, has come a long way since it took over from its debt-ridden predecessor IVP (Venezuelan Petrochemical Institute) in late 1977.

It has closed down some unprofitable operations. It has spun others off to other state agencies. With outside technical help, it has put many of its petrochemical units back on a sound operating basis, particularly its showcase olefins complex at El Tablazo.

Even Pequiven's detractors concede that the company's hard-core team of managers has put the Venezuelan petrochemical industry back on the road to recovery.

Now, Pequiven's big challenge, at least for 1982, will be to shape up the nitrogen fertilizer end of the industry. Among other things, Pequiven hopes to improve operations and increase production in its ammonia and urea plants located at El Tablazo in the Maracaibo region and at Moron in the central region.

More important, the company wants to increase the volume of fertilizer earmarked for the domestic agricultural market.

These goals became apparent in remarks made recently by Humberto Calderon Berti, Venezuela's Minister of Energy & Mines.

One big step in that direction is a change in fertilizer marketing responsibilities. After IVP was dissolved, Pequiven took over some of the fertilizer production responsibilities, while marketing was reconstituted in Venezolana de Fertilizantes (Venferca) under the Ministry of Agriculture.

This year, all of Venferca's functions will be centralized under Pequiven. As a result, Pequiven will handle fertilizer production, sales, distribution, and even imports of fertilizer materials.

Calderon Berti says that, rather than disrupt fertilizer distribution, the changeover likely will improve it. Meanwhile, Pequiven, along with the petrochemical coordinator of Petroleos de Venezuela, is making a major study of fertilizer pricing in the domestic Venezuelan market. They hope to come up with a pricing policy that guarantees a profit for Pequiven's fertilizer plants while, at the same time, protecting the country's agricultural sector from fluctuations in international markets.

Pequiven expects to receive about $121 million from Petroleos de Venezuela this year to use for petrochemical investment. About $41 million of this will be slated for the Moron complex, mostly to recondition and increase capacity of the fertilizer plants there.

At Moron, Pequiven operates a 198,000 metric-ton-per-year ammonia plant and a 248,000-metric-ton urea plant. Also at Moron are units to make the necessary heavy acids and finished fertilizers.

Most of the remaining $80 million will be spent at El Tablazo. A small portion of this, however, will go to Pequiven's headquarters operations in Caracas.

At El Tablazo, there are two 297,000-metric-ton ammonia plants and two 396,000-metric-ton urea plants. These units are owned and operated by Venezolana de Nitrogeno (Nitroven), but Pequiven owns 90% of Nitroven. The remainder is held by Instituto de Fomento Industrial (IFI) of Colombia.

Calderon Berti estimates that Venezuelan gross fertilizer production this year will reach 771,000 metric tons. If it does, it will be 236,000 metric tons, or 44%, more than was produced last year.

Meanwhile, Pequiven is shooting for an 88% increase in fertilizer shipments to the domestic market. Its goal: 398,300 metric tons this year.

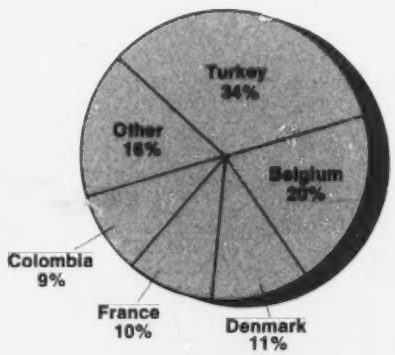
But Pequiven isn't overlooking the export market, either. This year's target is 613,300 metric tons of all petrochemical products, an 18% improvement over last year.

Fertilizer exports will play a big role in determining whether Pequiven meets that target. Last year, ammonia and urea exports accounted for almost 85% of Pequiven's export total. Most of those shipments originated from El Tablazo, whose fertilizer plants are dedicated to the export market. Moron is designed primarily to satisfy the domestic market.

Earl Anderson, New York

Venezuela's fertilizer exports: Most urea goes to Latin America, most ammonia to Europe

Total urea exports, 1981 = 240,000 metric tons



Total ammonia exports, 1981 = 214,900 metric tons

Source: Pequiven

Political action committees' influence grows

PACs of chemical firms and unions were among the more than 2000 that spent millions on political activities during the 1980 elections

The influence, as well as the number, of political action committees (PACs) continues to grow as the Federal Election Commission reports that these groups spent $131 million on the 1980 election. And, although they are not among the heavy spenders, chemical company PACs did make some significant contributions.

The number of these political funding and campaign groups has skyrocketed in recent years as more and more organizations have become willing to throw their support behind political issues. Although not even possible until passage of the Federal Election Campaign Act of 1971, PACs really started blossoming after 1974 amendments to that act clearly defined just how a PAC could operate. At the end of 1974 there were just 608 PACs registered, but by 1980 FEC was dealing with 2785 active committees.

Final figures for the 1980 election from FEC show that 2155 PACs contributed directly to candidates running for federal office. PACs raised more than $138 million for that election, contributing $55.2 million to Congressional races, $1.8 million to the Presidential election, and spending millions more for their own political activities. PACs spent just $35.2 million for the 1978 elections.

As indicated in the preliminary totals published right after the election (C&EN, Nov. 10, 1980, page 22), corporate PACs raised more money for their candidates than did PACs sponsored by labor organizations. But both of these lost out to the efforts by PACs that are not associated with any organization and those PACs representing trade associations.

These latter groups raised $75 million for 1980 elections. And most of the funds were not given to individual candidates, but spent independently—that is, without any coordination or consultation with a candidate's campaign. The largest of these independent PACs is the National Congressional Club, which raised nearly $8 million. Compare this to the largest corporate PAC, the Chicago & Northwestern Transportation Co. at $668,000 and the largest union PAC, the United Auto Workers, at $1.8 million. The dominance of these independent PACs, which tend to support ideological goals or single issues, is expected to increase.

FEC's list of the largest corporate PACs did not include any companies that are primarily chemical producers, although some oil companies that do produce a considerable quantity of chemicals are on that list. These include Standard Oil (Ind.)'s Amoco PAC, which raised more than $385,000 as the third largest, and Tenneco PAC, which at $272,000 is in seventh place.

Although not listed as a major fund raiser, Dow Chemical should be. Dow PACs raised almost $338,000 for 1980, but because it was done through eight regional PACs, FEC cannot lump the total Dow effort together.

On the worker side of the chemical industry, the chemical unions have their own PACs. The Oil, Chemical & Atomic Workers International Union raised more money than most chemical firms did, and supported only Democratic candidates. The International Chemical Workers Union

Chemical company PACs gave most of their support to House candidates in 1980

			CONTRIBUTIONS TO CANDIDATES					
			Presidential		Senate		House	
Company	Receipts	Disbursements	Democrat	Republican	Democrat	Republican	Democrat	Republican
Dow Chemical	$337,831	$333,759	–	$1000	$10,350	$89,050	$43,050	$114,325
U.S. Steel	180,171	183,906	$2000	—	13,500	29,900	33,525	49,010
Monsanto	109,302	105,020	1500	1015	7,000	11,528	16,075	19,960
FMC	106,507	98,475	500	1640	11,100	17,975	26,290	36,220
Diamond Shamrock	79,504	74,358	2000	6200	3,950	15,750	5,400	25,450
B. F. Goodrich	62,576	59,549	1000	1000	3,850	15,300	5,450	22,900
Akzona	54,319	46,487	—	—	1,000	11,000	1,600	32,850
American Cyanamid	52,538	60,397	—	—	4,000	16,850	4,650	32,547
Eastman Kodak	41,597	26,138	—	5000	1,600	5,000	2,000	12,450
Union Carbide	40,877	40,644	—	—	1,500	6,500	6,650	14,850
Allied Corp.	39,785	36,218	—	—	4,150	9,200	3,200	11,300
NL Industries	39,745	38,050	—	500	4,000	8,000	7,250	13,700
Celanese	30,422	31,075	—	—	4,000	3,500	8,775	14,500
Oil, Chemical & Atomic Workers International Union	58,970	63,514	250	—	11,344	—	11,877	—
International Chemical Workers Union	18,524	20,178	800	—	4,725	600	8,350	200

Source: Federal Election Committee

had a PAC as well, but supported Democrats and Republicans.

Action on the 1982 election has begun already, but FEC has little data on what is being done at this point by PACs. Although the amount of total spending is likely to be smaller this year because it isn't a Presidential election, it's a safe bet that the spending for House and Senate races will exceed that put out during 1980. □

Industry group supports cancer policy rethinking

The American Industrial Health Council can only be pleased that the Occupational Safety & Health Administration is reconsidering its generic cancer policy (C&EN, Jan. 11, page 20). And, in comments filed with the agency, the council says that it would welcome, during that review period, the stay OSHA has proposed on the policy's listing requirements.

These requirements specify that OSHA must issue annually a candidate list of substances which may be considered for possible regulation. Based on minimal scientific review, OSHA then can classify the substances as category I (best evidence of potential carcinogenicity) or category II (suggestive evidence). The policy also requires OSHA to publish at least every six months two priority lists: a list of 10 candidates for rule making as potential category I carcinogens and a list of about 10 candidates for category II rule making.

So far OSHA has not published either priority list, although it did publish a candidate list of about 200 substances in August 1980.

AIHC, an industry organization with about 140 member companies and about 60 cooperating trade associations, has challenged the cancer policy in court. It says it supports a stay of the listing requirements because "while of little utility in setting realistic priorities for OSHA regulation, these lists can be expected to lead to unwarranted concerns by the public and possible disruptions in the workplace as workers draw erroneous conclusions from the listing of particular substances. They also could become commercial blacklists and as such could have a serious adverse impact in the marketplace."

The council stresses that it agrees that OSHA should set priorities but says such decisions should be based upon sound scientific evaluation of all available evidence. □

Federal Alert— *new legislation*

This C&EN report highlights legislation introduced between Feb. 1 and Feb. 28. Senate and House bills are listed under subject area by bill number, primary sponsor, and committee(s) to which referred.

SENATE

Agriculture. S. 2122—Helms (R.-N.C.). Repeals requirements that USDA must hold a public hearing before prohibiting or restricting the movement of certain articles within the U.S. to prevent the spread of injurious plant diseases or insect pests; referred to Agriculture, Nutrition & Forestry.

Chemical warfare. S. 2078—Hart (D.-Colo.). Prohibits expenditure of any funds from the fiscal 1983 defense budget for the production or deployment of binary chemical weapons; referred to Armed Services.

Congress. S. 2008—Quayle (R.-Ind.). Establishes mechanisms for two-year Congressional budget approval process; referred to Budget, Governmental Affairs.

Copyright. S. 2044—Cochran (R.-Miss.). Amends the copyright law to exclude from the definition of a "work made for hire" one composed as a contribution to a collective work, such as magazine articles and short stories, or to an instructional text; referred to Judiciary.

Drugs. S. 2130—Kassebaum (R.-Kan.). Provides financial incentives for the development of so-called "orphan" drugs, eases regulatory requirements governing their approval; referred to Labor & Human Resources.

Energy. S. 2074—Johnston (D.-La.). Provides for the phased elimination of price controls on all catagories of natural gas, with complete decontrol taking effect on Jan. 1, 1985; referred to Energy & Natural Resources.

Environment. S. 2131—Moynihan (D.-N.Y.). Establishes procedures for the identification, designation of special protection areas within sole source aquifer regions; development, implementation of site-specific management plans to protect the areas; referred to Environment & Public Works.

Trade. S. 2071—Heinz (R.-Pa.). Provides the President with additional, discretionary authority to seek removal of nontariff barriers to trade; referred to finance.

HOUSE

Chemical warfare. H.R. 5608—Moffett (D.-Conn.). Prohibits the production of binary chemical weapons in the U.S., calls on President to enter into negotiations with U.S.S.R. immediately for a mutual, verifiable limitation on the production and stockpiling of such weapons; referred to Armed Services, Foreign Affairs.

Energy. H.R. 5404—Brown (R.-Colo.). Abolishes Synthetic Fuels Corp.; referred to Banking, Finance & Urban Affairs, Energy & Commerce.

H.R. 5441—Glickman (D.-Kan.). Amends the U.S. Synthetic Fuels Corp. Act to include biomass within the definition of synthetic fuels; referred to Banking, Finance & Urban Affairs, Energy & Commerce.

H.R. 5497—Moorhead (R.-Calif.). Repeals Department of Energy's building energy performance standards, industrial energy reporting regulations, and appliance efficiency standards; referred to Banking, Finance & Urban Affairs, Energy & Commerce.

H. Res. 371—Dingell (D.-Mich.). Expresses the sense of the House of Representatives that the Federal Energy Regulatory Commission should take no action to accelerate the decontrol of wellhead natural gas prices; referred to Energy & Commerce.

Environment. H.R. 5055—Rahall (D.-W.Va.). Requires 10-year federal acid precipitation study to be completed in five years, calls for examination of usefulness of precombustion treatment of fuels in reducing sulfur dioxide and nitrogen oxide emissions; referred to Energy & Commerce, Science & Technology.

H.R. 5555—Waxman (D.-Calif.). Amends Clean Air Act to require listing of 37 pollutants as hazardous, unless found not to be within one year; creates 31-state acid region in which sulfur dioxide emission must be reduced 10 million tons over next decade; referred to Energy & Commerce.

H.R. 5562—Carney (R.-N.Y.). Companion bill to S. 2131 above; referred to Energy & Commerce.

Food. H.R. 5491—Gore (D.-Tenn.). Amends food laws to define safe as a "reasonable certainty that the risks of a substance under the intended conditions of use are insignificant," permits FDA to phase substances out of food over a period of up to five years, authorizes development of external peer review mechanisms for food safety decisions; referred to Energy & Commerce.

Innovation. H.R. 5444—Hammerschmidt (R.-Ark.). Requires federal agencies with an R&D budget of more than $1 million to set aside 3% of that budget for a three-phase small business innovation research program; referred to Small Business.

Patents. H.R. 5602—Kastenmeier (D.-Wis.). Sets fees for processing and maintaining patents and trademarks at level sufficient to recover costs; referred to Judiciary.

Taxes. H.R. 5517—Evans (R.-Iowa). Denies a tax deduction for interest on indebtedness incurred to acquire corporations, if the President determines that the use of debt for such purposes should be discouraged; referred to Ways & Means.

Trade. H.R. 5457—Brodhead (D.-Mich.). Companion bill to S. 2071 above; referred to Ways & Means.

H.R. 5604—McDade (R.-Pa.). Encourages exports by facilitating formation and operation of export trading companies, export trade associations, the general expansion of export trade services; referred to Foreign Affairs, Banking, Finance & Urban Affairs, Judiciary.

NOTE

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